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FEB 22 2002

Mr. James A. Saric, Remedial Project Manager
United States Environmental Protection Agency
Region V-SRF-5J
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

DOE-0333-02

Mr. Tom Schneider, Project Manager
Ohio Environmental Protection Agency
401 East 5th Street
Dayton, Ohio 45402-2911

Dear Mr. Saric and Mr. Schneider:

TRANSMITTAL OF RESPONSES TO THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY AND OHIO ENVIRONMENTAL PROTECTION AGENCY COMMENTS AND THE REVISED PROJECT SPECIFIC PLAN FOR WASTE PITS REMEDIAL ACTION PROJECT INVESTIGATION OF WASTE PIT LINERS AND LINER SUBSURFACE MATERIAL

Enclosed for your approval are responses to the United States Environmental Protection Agency (USEPA) and Ohio Environmental Protection Agency (OEPA) comments and the revised Project Specific Plan (PSP) for Waste Pits Remedial Action Project Investigation of Waste Pit Liners and Liner Subsurface Material. This PSP proposes the sampling strategy to investigate the possible presence of contamination in the clay liner material and the material below the liners within the waste pit floor area currently uncovered by excavation. This activity will be conducted in multiple phases as excavation of the waste pits progresses. The information from this investigation effort will be used to facilitate the remediation of the waste pit liners and underlying material.

If you have any questions or need further information, please contact Robert Janke at (513) 648-3124.

Sincerely,

Johnny Reising

FEMP:R.J. Janke

Johnny W. Reising
Fernald Remedial Action
Project Manager

Enclosures: As Stated

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cc w/enclosures:
R. Greenberg, EM-31/CLOV
R. J. Janke, OH/FEMP
T. Schneider, OEPA-Dayton (three copies of enclosures)
F. Hodge, Tetra Tech
AR Coordinator, Fluor Fernald, Inc./MS78

cc w/o enclosures:
A. Tanner, OH/FEMP
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RESPONSES TO U.S. ENVIRONMENTAL PROTECTION AGENCY TECHNICAL REVIEW COMMENTS ON THE DRAFT PROJECT SPECIFIC PLAN FOR WASTE PITS REMEDIAL ACTION PROJECT INVESTIGATION OF WASTE PIT LINERS AND LINER SUBSURFACE MATERIAL (10000-PSP-0003, REVISION A)

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

SPECIFIC COMMENTS

Commenting Organization: U.S. EPA — Commentator: Saric
Section #: 2.1 — Pg. #: 2-1 — Line #: Not applicable
Original Specific Comment #: 1

Comment: The text and the figures and table cited identify locations for ten proposed borings in the currently exposed portions of the floors of Waste Pits 1 and 3. Section 1.4 notes that additional borings are to be completed as more floor is exposed and that approval of the proposed locations for these borings are to be obtained through the Variance/Field Change Notice system. Section 2.1 should be expanded to provide guidance for selection of future boring locations in order to ensure adequate coverage of potentially contaminated areas. This guidance should include requirements for the maximum floor area to be evaluated using a given boring, the maximum distance between borings, and the minimum number of samples to be collected from each pit, as well as a general requirement for completion of additional, more closely spaced borings as necessary to define the extent of any contamination identified.

Response: The primary purpose of this investigation is to refine tonnage estimates of material requiring excavation. The Soil and Disposal Facility Project will be responsible for statistically valid postexcavation certification sampling to demonstrate attainment of final remediation levels. It is agreed that guidance for selection of future boring locations, boring and sample density, and criteria for defining the extent of any contamination identified, should be provided for any subsequent pit liner/subsuface material investigation borings conducted by WPRAP. However, it is felt that such guidance and criteria would be better developed following evaluation of the analytical results of these initial ten borings. In response to this comment, and those of Ohio EPA, the Project Specific Plan has been modified to require that before any borings beyond the original ten are completed, DOE will submit to the agencies a detailed report of the data and resulting conclusions from these borings for review and comment. Followup boring activity will be initiated only after mutual agreement exists on guidance and criteria for future borings based on evaluation of the data developed from these ten borings.

Action: The text of Section 1.1 has been changed to read: "This activity will be conducted in multiple phases as excavation of the waste pits progresses. Additional boring activity will be scheduled only after reporting and evaluation of the data from the previous phase of borings indicates that further data will be required to achieve the above objectives."

The text of Section 1.4 has been changed to read: "Additional borings beyond the ten currently proposed will not be conducted until data from these initial borings are evaluated and a detailed report containing the data and resulting conclusions about the thickness of the liners and presence/level of contamination within and below the pit floors is submitted to

the agencies for review and comment. Further borings will be scheduled only if there is mutual agreement between DOE and the EPAs that additional data are necessary ."

Commenting Organization: U.S. EPA Commentator: Saric
Section #: 2.2 Pg. #: 2-1 Line #: 17
Original Specific Comment #: 2

Comment: The text states that at each boring location, one composite sample will be collected from 4 feet of "subsurface material" below the clay liner and analyzed for dioxins and furans. Dioxins and furans have very low mobility, so they are most likely to be present in the uppermost soil material. In addition, compositing always raises the sample detection limit. Therefore, at a given boring location, if a clay liner is missing or very thin (for example, less than 2 feet thick), two subsurface samples should be collected and analyzed for dioxins and furans: one sample from the uppermost 1 foot and the other sample from the rest of the boring. This procedure would increase the probability of detecting low-concentration dioxin and furan contamination if it is present.

Response: Agreed.

Action: The text of Section 2.2 has been changed to read: "Up to four samples for TAL E will be collected from each boring: one from the first 1-foot interval of liner material; another from material composited from the remaining depth of liner material, if applicable; a third sample from the first 1-foot interval of the liner subsuface material; and a fourth sample composited from the 3 feet of subsurface material below the third sample."

RESPONSES TO OHIO ENVIRONMENTAL PROTECTION AGENCY COMMENTS ON THE DRAFT PROJECT SPECIFIC PLAN FOR WASTE PITS REMEDIAL ACTION PROJECT INVESTIGATION OF WASTE PIT LINERS AND LINER SUBSURFACE MATERIAL (10000-PSP-0003, REVISION A)

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

GENERAL COMMENTS

Commenting Organization: Ohio EPA — Commentator: OFFO
Section #: — Pg. #: — Line #: — Code: General
Original Comment #: 1

Comment: Breaching of the native clays overlaying the GMA has a potential for serious consequences. The Ohio EPA has recently rejected a proposal to install monitoring wells in the footprint of the OSDF because we considered the risk of contaminating the GMA to out weigh any benefits of defining the extent and movement of what was known as the Plant 6 plume. Our concerns about the sampling proposed in this Plan are greater because the potential source of contamination is so much greater. However, we acknowledge the large data gaps that exist in defining the thickness and extent of the waste pits liners and the extent of the contamination in the underlying soils. We also appreciate that it is impossible to plan for the costs and schedule impacts using only the knowledge we have at the present time. Nevertheless, we entertain the proposal to pierce the liners with a great deal of trepidation.

Response: We share the concern about the sensitive nature of conducting these borings through the pit liners and appreciate Ohio EPA's understanding of the necessity for additional data. The Project Specific Plan (PSP) has been written with requirements for numerous safeguards to minimize the risk of Great Miami Aquifer (GMA) contamination and project management will conduct close oversight of the boring activity to ensure every effort is made to avoid downhole contamination. Further, after completion of these initial borings, evaluation of the associated data may result in conclusions that will allow fewer additional borings as excavation proceeds.

Action: Waste Pits Remedial Action Project (WPRAP) personnel will closely monitor boring activities to ensure compliance with safeguards to minimize risk of GMA contamination.

Commenting Organization: Ohio EPA — Commentator: OFFO
Section #: — Pg. #: — Line #: — Code: General
Original Comment #: 2

Comment: We see a disconnect between the Decision in Section 2.0 in the DQOs and the text in the Plan. Section 2.0 states, "Delineate the vertical and/or horizontal extent of contamination of the waste pit liner material as well as that of the soils underlying the waste pits". However, the Plan calls for only ten samples from two waste pits. We maintain that the number of samples is not sufficient to achieve the DQOs. We are not suggesting that the number of samples be increased, but rather that the objectives of this investigation are not adequately reflected by the DQOs.

The statement of problem (Section 1.0 of the DQOs) is to define the extent of the contamination with respect to FRLs and WAC. We suggest that the problem statement be re-drafted to reflect that the RI/FS investigation did not determine the quantities of either

the pit liners or the quantity of impacted soil below the liner. Determining these volumes for planning purposes is the problem to be answered.

Response: Agreed.

Action: The Data Quality Objective (DQO) text has been revised to the following:

1.0 Statement of Problem
Because of the risk of further contamination of the Great Miami Aquifer, the OU1 RI/FS borings in the Waste Pits did not penetrate the waste clay pit liner material or the underlying material. As excavation of the waste pits proceeds and portions of the various waste pit bottoms are exposed, borings and sampling are required to determine the quantity of clay pit liner material as well the extent to which liner and subliner material may have been impacted by migration of pit contamination. This data is necessary for determination of total impacted pit liner and subsurface material volumes, and subsequent planning and scheduling of excavation activities.

2.0 Identify the Decision
Determine the volume of waste pit clay liner material and the extent of its contamination, as well as determining the presence/volume of contaminated soils underlying the waste pit liners.

SPECIFIC COMMENTS

Commenting Organization: Ohio EPA Commentator: OFFO
Section #: 1.1 Pg. #: 1-1 Line #: 20 Code: C
Original Comment #: 3
Comment: The text states that "This activity will be conducted in multiple phases as excavation of the waste pits progresses". Plans for future sampling through the waste pits liners should be deferred until the data from the current samples are analyzed. An analysis of the data may conclude that soil quantities may be estimated reliably enough for planning purposes using only the data from Pits 1 and 3.

Response: Agreed.

Action: The text of Section 1.1 has been changed to read: "This activity will be conducted in multiple phases as excavation of the waste pits progresses. Additional boring activity will be scheduled only after reporting and evaluation of the data from the previous phase of borings indicates that further data will be required to achieve the above objectives."

Commenting Organization: Ohio EPA Commentator: OFFO
Section #: 1.3 Pg. #: 1-2 Line #: 25 Code: C
Original Comment #: 4
Comment: It appears that radiological constituents were inadvertently left off of the COC list. Please correct.

Response: Agreed.

Action: Radiological has been added to constituent of concern (COC) list.

Commenting Organization: Ohio EPA | Commentator: OFFO
Section #: 1.4 | Pg. #: 1-3 | Line #: 8 | Code: C
Original Comment #: 5

Comment: The text states that, "Later additional borings and sampling activities...will be identified by a Variance/Field Change Notice to this PSP". This is not acceptable. A detailed report should be written for review and approval. The report should contain the data from this initial study and identify conclusions about the thickness of the liners and the depth of contamination below the liners. An analysis of data shortfalls should be used to justify taking additional samples form the other pits. There is a possibility that data from Pits 1 and 3 will be conclusive enough to infer the depth of contamination below the other pits.

Response: Agreed.

Action: The PSP text has been changed to read: "Additional borings beyond the ten currently proposed will not be conducted until data from these initial borings are evaluated and a detailed report containing the data and resulting conclusions about the thickness of the liners and presence/level of contamination within and below the pit floors is submitted to the agencies for review and comment. Further borings will be scheduled only if there is mutual agreement between DOE and the agencies that additional data are necessary."

Commenting Organization: Ohio EPA | Commentator: OFFO
Section #: 2.2 | Pg. #: 2-1 | Line #: 20 | Code: C
Original Comment #: 6

Comment: The text states that, "For those pits with clay liners, the liner and the liner subsurface materials are of distinctly different composition". However, the text on Line 14, Page 1-2 states that Pits 1 and 3 (among others) are lined with native clay either from an *in situ* clay lens or excavated from the Burn Pit. It is unclear how a visual examination of cores will be able to distinguish between a liner constructed from *in situ* clay and the undisturbed original tills.

Response: Agreed that the text should be more detailed in specifying typical parameters used to distinguish between an *in situ* clay lens and underlying undisturbed original tills.

Action: The PSP text has been changed to read: "In those pits constructed using an *in situ* clay lens as the pit liner, there may not be a distinct and identifiable interface between the clay-rich glacial till liner material and underlying till materials. For those pits where man-made clay liners were constructed, the project geologist will attempt to identify the interface between the constructed clay pit liner material and the material below the constructed liner by evaluation of certain lithological characteristics. These characteristics include material stratification, particle size, color, moisture content, density, and related geotechnical properties."

Commenting Organization: Ohio EPA | Commentator: OFFO
Section #: 2.2 | Pg. #: 2-1 | Line #: 28 | Code: C
Original Comment #: 7

Comment: The text states that samples will be collected with a vehicle-mounted Geoprobe system unless the borehole location is inaccessible in which case the sampling instrument will be manually driven. The Ohio EPA will comment elsewhere that all boreholes should be plugged using an injected bentonite grout slurry and not bentonite pellets. Considering the pumps and hoses associated with injecting grout, it may be best to limit this investigation to only those locations that are accessible to the vehicle-mounted direct push equipment.

Response: The power source and pump used to inject slurried grout are separate pieces of equipment and can be used apart from the Geoprobe equipment. Every effort will be made to conduct borings using only the vehicle-mounted direct push equipment, but the challenging access conditions for a non-tracked vehicle in the partially excavated waste pits may require the use of an alternative method of boring. However, this should not prevent the injection of slurried grout at all boring locations.

Action: None.

Commenting Organization: Ohio EPA Commentator: OFFO
Section #: 2.6 Pg. #: 2-4 Line #: 26 Code: C
Original Comment #: 8
Comment: Because of the high costs associated with remediating the GMA and the increased potential of contaminating the aquifer, boreholes should only be closed using an injected grout slurry. The use of bentonite pellets is not acceptable.

Response: Agreed.

Action: The PSP text has been changed to read: "Each borehole will be plugged using a bentonite grout slurry injected immediately after sampling is completed."